Oil Field Environmental Incident Summary

Incident: 20140204083225 **Date/Time of Notice:** 02/04/2014 08:14

Responsible Party: Denbury

Well Operator: DENBURY ONSHORE, LLC

Well Name: T. R. STATE SWD 1

Field Name: T. R. **Well File #:** 90025

Date Incident: **2/3/2014** **Time Incident:** 2000 **Facility ID Number:**

County: BILLINGS **Twp:** 141 **Rng:** 101 **Sec:** 23 **Qtr:**

Location Description: on the old Franks creek 4-23 well location, just south of the TR water plant. This is about 1/4 mile southwest of the TR State SWD 1.

Submitted By: Mark VanGrinsven **Received By:**

Contact Person: Mark
5320 LEGACY DR
PLANO, TX 75024-3127

General Land Use: Badlands Terrain **Affected Medium:** Topsoil

Distance Nearest Occupied Building: 2 Miles

Distance Nearest Water Well: 2 Miles

Type of Incident: Pipeline Leak

Release Contained in Dike: No **Reported to NRC:** Unknown

	Spilled	Units	Recovered	Units	Followup	Units
Oil	0	barrels	0	barrels		
Brine	**100**	**barrels**	**10**	**barrels**	**100**	**barrels**
Other	0	barrels	0	barrels		

Description of Other Released Contaminant:

Inspected: **Written Report Received:** 2/17/2016 **Clean Up Concluded:** 10/8/2014

Risk Evaluation:
none

Areal Extent:
from 1 ft to 50 ft wide by 100 yds long

Potential Environmental Impacts:

Was near Government Creek but it does not appear to have reached the creek. We will investigate further at first light.

Action Taken or Planned:

Wells that feed the water plant were shut in and pipelines isolated. A catch hole was dug last night to catch any flowing water before it could reach the creek. Fluid was then recovered via vacuum truck through the night. Flow has stopped as of this morning and emergency one-call has been made. We will excavate the pipeline this morning.

Wastes Disposal Location: Contractor will dispose

Agencies Involved:

Updates

Date: 2/4/2014 ***Status:*** Reviewed - Follow-up Required ***Author:*** Stockdill, Scott

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

According to the incident summary, this spill impacted areas off of location. Followup is required.

Date: 2/7/2014 ***Status:*** Inspection ***Author:*** O'Gorman, Brian

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location at 10:00 CT, 2/7/14. Weather conditions: -8 F, sunny, west wind 5-10 mph. Observed site, spoke to contractors, and took photos. Upon arrival, the subcontractor was excavating soils from the likely area of the release. The area of the release and excavation was a few feet south of the road next to the well pad. The release was evident from the excavation area by oil-stained soils that ran downgradient from the excavation area in a 2- to 5-foot width for approximately 50 feet on a slope of approximately 5 to 10 percent. Beyond the oil-stained soils were snow-covered areas and frozen water/brine that had pooled in an area with a slight slope (1 to 3 percent) which measured approximately 100 feet across (west-east) to 150 feet lengthwise (north-south). The frozen water/brine was anywhere from a portion of an inch to a depth of 4.5 inches near the center of the area. Ice on the surface of the center of the area was not completely frozen and exhibited a slushy consistency, most likely due to a high salt content. I spoke with Mr. Mark VanGrinsven, representative of Denbury, on the phone during the inspection, and he stated that they were going to excavate the area of the release and scrape ice and soil that had been affected. By having a consultant test the soils while they remove the ice, they can determine the amount of soil needing to be removed during the remediation. Local creek borders south, west and east portions of release. Followup needed next week during the remediation to determine extent (vertical and horizontal) of release and the appropriate remediation method after consulting test results.

Date: 2/13/2014 ***Status:*** Inspection ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

2/13/2014 at 13:26, on location. 20 degrees Fahrenheit. Area beside road has been excavated and line is visible. Piles of dirt around excavation are unfrozen, 13.53 mS conductivity at 3 in depth when tested. Downslope to the southwest, layer of ice on slope; surface readings on ground here show under 3 mS conductivity. At bottom of slope in flat land which is bordered on three sides by creek, slush and some liquid is present. Test on slush shows 69.8 mS conductivity at the surface.

Date: 2/13/2014 ***Status:*** Correspondence ***Author:*** O'Gorman, Brian

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Received a phone call from a Denbury representative at 11:10 am, 2/13/14. The representative informed me that the company's contractor had excavated the areas where the brine water release had pooled and frozen on the soil surface. The representative estimated that the area of frozen brine water and soil excavated was approximately 60 yards by 120 yards. Chloride tests were also conducted around the perimeter of the excavation to determine extent and in the excavation to determine horizontal chloride concentrations. According to the Denbury representative, the highest chloride readings within the excavated areas were 200 ppm. Depth of soil removed from the area varied from an approximate depth of 2 to 8 inches. A document of the chloride results and depths of excavation were requested for further examination to determine whether the removal of the product is complete. The Denbury rep also stated that they had not found the source of the leak and were in the process of running fresh water through the line and pressuring up to identify leak area. No further soil removal or restoration was suggested until leak area was identified. Follow up next week to determine if source of leak was identified and if area of release was remediated to an acceptable extent.

Date: 6/2/2014 ***Status:*** Inspection ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

6/2/2014 at 12:32, on location. Excavated line has been reburied and fenceline rebuilt. Path down slope starting to grow back, and bottom of path has growth coming in slowly where it was scraped originally. However, black residue consisting of multiple 1- to 3-inch pieces is visible on path slope, and vegetation under this black residue is stained brown. Faint odor from these spots. Will coordinate with other NDDoH inspector to contact responsible party about removing black residue.

Date: 8/25/2014 ***Status:*** Inspection ***Author:*** O'Gorman, Brian

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location at 16:40 CT. Mostly cloudy, 56 degrees F, west wind 5-15 mph. Observed the site and took photos. Observations of the areas impacted by the release showed that vegetation covered approximately 75% of the soil surface with less vegetative cover nearest the initial release, just south of the lease road. Follow up next spring or summer to document vegetative growth in areas impacted by the release.

Date: 9/30/2014 ***Status:*** Inspection ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

9/30/2014 at 16:02, on location. Plastic containers and pile of dirt no longer on location. Impact down hill slope on west side of wellpad scraped, and straw matting was placed on scraped area. No staining visible on vegetation outside of scraped area. No visible staining within straw matting or on wellpad next to scraped area. Follow up next spring or summer to document vegetative growth in areas impacted by the release.

Date: 9/16/2015 ***Status:*** Inspection ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

9/16/2015 at 14:38, on location. Area is revegetated, including on pipeline excavation. No further followup required.